Flash Memory Upgrade

The **VA-16xl** firmware is located in FLASH memory, which lets you upgrade to the latest Kramer firmware version in minutes! The process involves:

- Downloading from the Internet (see section 1.1)
- Connecting the PC to the RS-232 port (see section 1.2)
- Upgrading Firmware (see section 1.3)

1.1 Downloading from the Internet

You can download the up-to-date file from the Internet. To do so:

1. Go to our Web site at http://www.kramerelectronics.com and download the file: "*Flash_VA16xl.zip*" from the Technical Support section.

2. Extract the file: "*Flash_VA16xl.zip*" to a folder (for example, C:\Program Files\Kramer Flash).

1.2 Connecting the PC to the RS-232 Port

Before installing the latest Kramer firmware version on a **VA-16xl** unit, do the following:

1. Connect the RS-232 DB9 rear panel port on the **VA-16xl** unit to the Null-modem adapter and connect the Null-modem adapter with a 9 wire flat cable to the RS-232 DB9 COM port on your PC (see section **Error! Reference source not found.**).
It is recommended that you use COM port[1] 2. However, if your computer has only one COM port, open the file: "*Va16xl.cfg*" (located at C:\Program Files\Kramer Flash\Va16xl.cfg) in **Notepad**, and change "*set port COM2*" to "*set port COM1*".

2. Set the dipswitches as follows:

- **Set DIP 8 ON**
- **Set DIP 7 ON**

3. **Connect the power cord and turn the *POWER* switch on the VA-16xl *ON***.
The 7-segment LED Displays may show erratic data, which should be ignored.

1.3 Upgrading Firmware

Follow these steps to upgrade the firmware:

1. Double click the desktop icon: "*Shortcut to FLIP.EXE*".
The Splash screen appears as follows:

Figure 1: Splash Screen

1 The software is preset for use with COM port 2

2. After a few seconds, the Splash screen is replaced by the "*Atmel – Flip*" window:

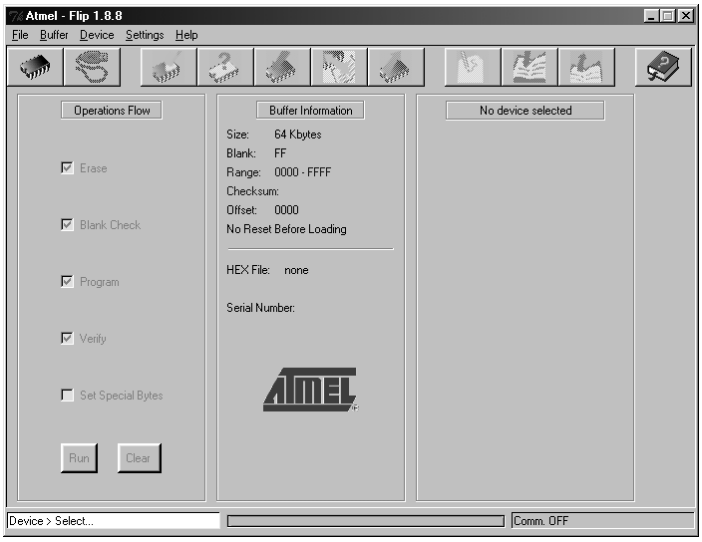

Figure 2: Atmel – Flip Window

3. Press the keyboard shortcut key *F4* (or select the "*Read Configuration File*" command from the *File* menu, or press the keys: *Alt FR*).
The "*Open Configuration File*" window appears:

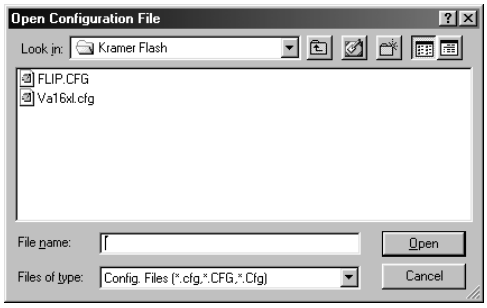

Figure 3: Open Configuration File Select Window

4. Choose the file: "*Va16xl.cfg*" (by double-clicking it).
If COM 2 was not selected (see section 1.2), an RS-232 error message appears. In the "*Atmel – Flip*" window, the *Operations Flow* column is disabled, and crosses appear in the third column.

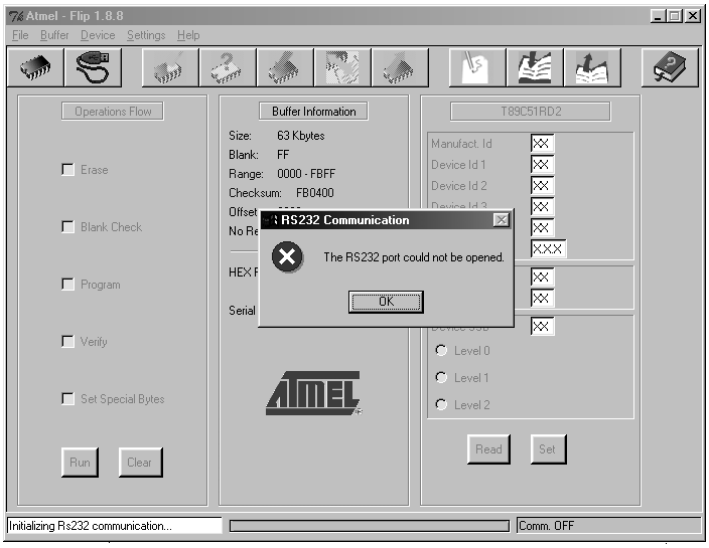

Figure 4: Atmel – Flip Window (RS-232 Communication)

5. Click OK and press the keyboard shortcut key *F3* (or select the "*Communication / RS232*" command from the *Settings* menu, or press the keys: *Alt SCR*).
The "*RS232*" window appears. Change the COM port:

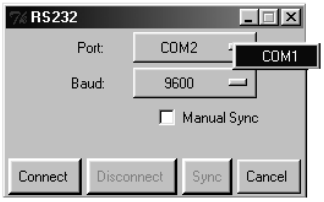

Figure 5: RS-232 Window

6. Click Connect.
In the "*Atmel – Flip*" window, in the *Operations Flow* column, the *Run* button is active, and the name of the chip appears as the name of the third column: *T89C51RD2*.
Verify that in the *Buffer Information* column, the "*HEX File: Va16xl.hex*" appears.

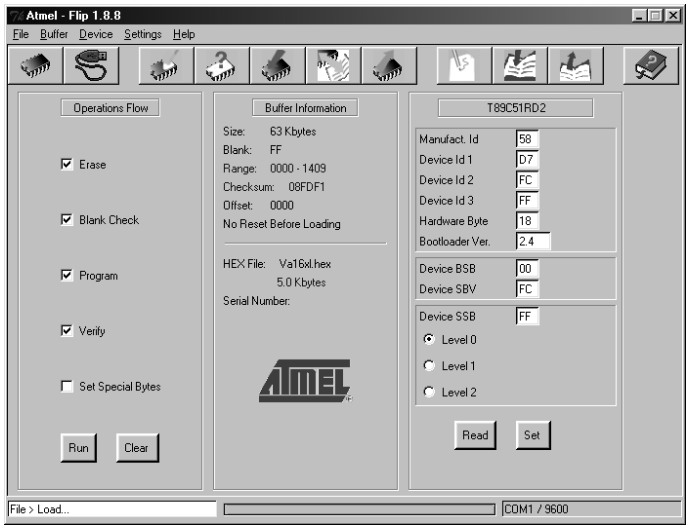

Figure 6: Atmel – Flip Window (Connected)

7. Click *Run*.
After each stage in the operation is completed, the check-box for that stage becomes colored green[2].
When the operation is completed, all 4 check-boxes will be colored green and the status bar message: *Memory Verify Pass* appears[3]:

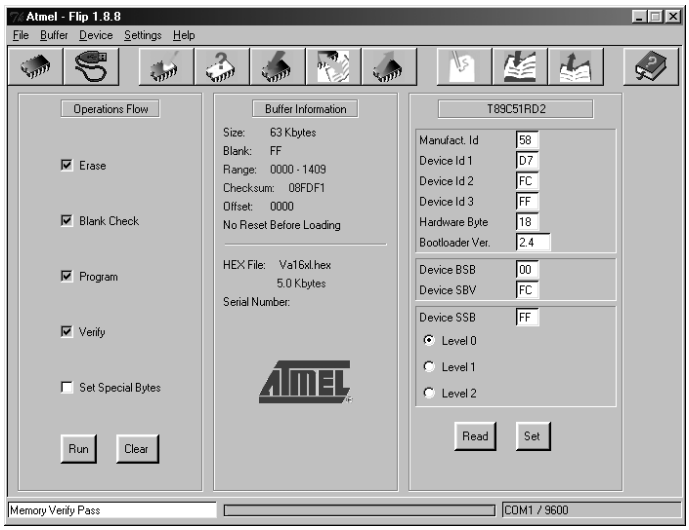

Figure 7: Atmel – Flip Window (Operation Completed)

2 See also the blue progress indicator on the status bar

3 If an error message: "Not Finished" shows, click Run again

8. Close the "*Atmel – Flip*" window.
9. **Turn the POWER switch on the VA-16xl OFF**.
10. Disconnect the RS-232 DB9 rear panel port on the **VA-16xl** unit from the Null-modem adapter.
11. **Set DIP 7 OFF**.
12. **Set DIP 8 OFF**.
13. Turn the *POWER* switch on the **VA-16xl** *ON*.

Upon initialization, the new **VA-16xl** software version shows in the RIGHT/dB 7-segment LED Display.